Title (en)

A QUBIT APPARATUS AND A QUBIT SYSTEM

Title (de)

QUBIT-VORRICHTUNG UND QUBIT-SYSTEM

Title (fr)

APPAREIL ET SYSTÈME À BITS QUANTIQUES

Publication

EP 3574455 B1 20240306 (EN)

Application

EP 18702576 A 20180126

Priority

- NL 2018253 A 20170127
- NL 2018050057 W 20180126

Abstract (en)

[origin: WO2018139928A1] A transmon qubit comprising a plate capacitor comprising a first plate (202) and a second plate (203) wherein the first plate is disposed opposite to at least a part of the second plate, wherein the first plate and the second plate are connected via a nonlinear inductance element (304), and a capacitance (205) formed between the first plate and the second plate, wherein the first plate and the second plate are configured to form a vacuum gap capacitor.

IPC 8 full level

G06N 10/40 (2022.01)

CPC (source: EP US)

G06N 10/00 (2019.01 - US); **G06N 10/40** (2022.01 - EP); **G11C 11/44** (2013.01 - US); **H01P 7/08** (2013.01 - US); **H10N 60/12** (2023.02 - US); **H10N 60/805** (2023.02 - US)

Citation (examination)

- WENNER J ET AL: "Surface loss simulations of superconducting coplanar waveguide resonators", ARXIV.ORG, CORNELL UNIVERSITY LIBRARY, 201 OLIN LIBRARY CORNELL UNIVERSITY ITHACA, NY 14853, 23 July 2011 (2011-07-23), XP080517243, DOI: 10.1063/1.3637047
- M. H. DEVORET ET AL: "Superconducting Circuits for Quantum Information: An Outlook", SCIENCE, vol. 339, no. 6124, 7 March 2013 (2013-03-07), US, pages 1169 - 1173, XP055430188, ISSN: 0036-8075, DOI: 10.1126/science.1231298

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2018139928 A1 20180802; CN 110383303 A 20191025; CN 110383303 B 20231212; EP 3574455 A1 20191204; EP 3574455 B1 20240306; EP 3574455 C0 20240306; NL 2018253 B1 20180807; US 11170846 B2 20211109; US 2019385673 A1 20191219

DOCDB simple family (application)

NL 2018050057 W 20180126; CN 201880016003 A 20180126; EP 18702576 A 20180126; NL 2018253 A 20170127; US 201816480713 A 20180126